What is claimed is:

1. A measurement system (200) comprising a Coriolis flow meter (222) and a control system (224),

said measurement system characterized by:

said Coriolis flow meter being configured to measure a density of a base fluid (250) flowing through said Coriolis flow meter to generate a base fluid density measurement, transmit said base fluid density measurement, measure a density of a fracture fluid (202) flowing through said Coriolis flow meter to generate a fracture fluid density measurement, wherein said fracture fluid comprises a mixture of said base fluid and a proppant (252), and transmit said fracture fluid density measurement; and

said control system being configured to receive said base fluid density measurement and said fracture fluid density measurement, and determine an amount of said proppant in said fracture fluid based on said base fluid density measurement, said fracture fluid density measurement, and a density of said proppant.

2. The measurement system (200) of claim 1 wherein said Coriolis flow meter (222) comprises a straight tube Coriolis flow meter (400).

3. The measurement system (200) of claim 1 wherein said Coriolis flow meter (222) is configured to receive a slip stream (280) of said fracture fluid (202) to measure said density of said fracture fluid.

4. The measurement system (200) of claim 1 further comprising:

a first tube (226) having a first end (271) configured to connect to an input of said Coriolis flow meter (222) and having a second end (272) configured to connect to a discharge (218) of a tank (210); and

a second tube (227) having a first end (281) configured to connect to an output of said Coriolis flow meter and having a second end (282) configured to connect to said tank;

wherein said first tube is configured to receive a slip stream (280) of material from said discharge of said tank, said slip stream travels through said first tube, through said Coriolis flow meter, through said second tube, and back into said tank.

5. The measurement system (200) of claim 1 wherein said control system (224) is configured to determine said density of said proppant (252).

6. The measurement system (200) of claim 1 wherein said control system (224) comprises:

a display system (302) configured to provide said amount of said proppant (252) to a user.

7. The measurement system (200) of claim 1 wherein said control system (224) comprises:

an auxiliary interface (306) configured to transmit a signal representing said amount of said proppant (252) to an auxiliary system.

8. The measurement system (200) of claim 1 wherein said control system (224) comprises:

a user interface (304) configured to receive said density of said proppant (252) entered by a user.

9. The measurement system (200) of claim 1 wherein said control system (224) is configured to:

calculate a velocity of said fracture fluid (202);

determine if said velocity of said fracture fluid exceeds a threshold; and

provide an indication if said velocity of said fracture fluid exceeds said threshold.

10. The measurement system (200) of claim 1 wherein said control system (224) is configured to:

calculate an average density of said base fluid (250) based on a plurality of density measurements of said base fluid by said Coriolis flow meter (222); and

determine said amount of said proppant (252) in said fracture fluid (202) based on said average density of said base fluid, said fracture fluid density measurement, and said density of said proppant.

11. The measurement system (200) of claim 1 wherein:

said Coriolis flow meter (222) is configured to measure a mass flow rate of said fracture fluid (202), and provide at least one of said mass flow rate of said fracture fluid and a drive gain of said Coriolis flow meter to said control system (224); and

said control system is configured to provide at least one of said mass flow rate of said fracture fluid and said drive gain of said Coriolis flow meter to a user.

12. A method of measuring an amount of proppant in a fracture fluid, said method comprising the step of:

determining a density of said proppant;

said method characterized by the steps of:

measuring a density of a base fluid (250) with a Coriolis flow meter (222) to generate a base fluid density measurement;

measuring a density of a fracture fluid (202) with said Coriolis flow meter to generate a fracture fluid density measurement, wherein said fracture fluid comprises a mixture of said base fluid and a proppant (252); and

determining an amount of said proppant in said fracture fluid based on said base fluid density measurement, said fracture fluid density measurement, and said density of said proppant.

13. The method of claim 12 wherein the step of measuring a density of a fracture fluid (202) with said Coriolis flow meter (222) comprises:

measuring said density of said fracture fluid with a straight tube Coriolis flow meter (400).

14. The method of claim 12 wherein the step of measuring a density of a fracture fluid (202) with said Coriolis flow meter (222) comprises:

receiving a slip stream (280) of said fracture fluid into said Coriolis flow meter to measure said density of said fracture fluid.

15. The method of claim 12 further comprising the steps of:

connecting a first end (271) of a first tube (226) to an input of said Coriolis flow meter (222);

connecting a second end (272) of said first tube (226) to a discharge (218) of a tank (210);

connecting a first end (281) of a second tube (227) to an output of said Coriolis flow meter; and

connecting a second end (282) of said second tube (227) to said tank;

wherein said first tube receives a slip stream (280) of material from said discharge of said tank, said slip stream travels through said first tube, through said Coriolis flow meter, through said second tube, and back into said tank.

16. The method of claim 12 further comprising the step of:

providing said amount of said proppant (252) to a user.

17. The method of claim 12 further comprising the step of:

transmitting a signal representing said amount of said proppant (252) to an auxiliary system.

18. The method of claim 12 further comprising the step of:

receiving said density of said proppant (252) from a user.

19. The method of claim 12 further comprising the steps of:

calculating a velocity of said fracture fluid (202);

determining if said velocity of said fracture fluid exceeds a threshold; and

providing an indication if said velocity of said fracture fluid exceeds said threshold.

20. The method of claim 12 further comprising the steps of:

calculating an average density of said base fluid (250) based on a plurality of density measurements of said base fluid by said Coriolis flow meter (222); and

determining said amount of said proppant (252) in said fracture fluid (202) based on said average density of said base fluid, said fracture fluid density measurement, and said density of said proppant.

21. The method of claim 12 further comprising the steps of:

measuring a mass flow rate of said fracture fluid (202) with said Coriolis flow meter (222); and

providing at least one of said mass flow rate of said fracture fluid and a drive gain of said Coriolis flow meter to a user.